The Readiness Analysis of Online Learning at Undergraduate Students in Pandemic Era

Abstract

At the end of 2019, the emergence of COVID-19 affected all areas of life, especially education. Since there was still no certainty when this pandemic will end, online learning was an absolute necessity that must be fulfilled by all Indonesian students. This research aimed to determine the readiness of undergraduate students in online learning during the COVID-19 pandemic. This research was a qualitative research method using closed-ended questionnaires and interviews. Subjects of this research were undergraduate students at the University of Muhammadiyah Prof. Dr. Hamka. The results of this study show that students’ readiness were high in computer/internet self-efficacy, self-directed learning, and motivation for learning, on the dimension of learner control and online communication self-efficacy students’ readiness were moderate. It can be concluded that undergraduate students at the University of Muhammadiyah Prof. Dr. Hamka are ready to face online learning. Furthermore, suggestions concerning the improvement of Online Learning Readiness were also discussed in this study.

Keywords: covid-19, online learning, undergraduate students’ readiness
A. Introduction

At the end of 2019, the emergence of COVID-19 happened first in Wuhan, China. This virus spread rapidly within a month. In January 2020, the World Health Organization (WHO) declared COVID 19 being an International Public Health Emergency as a high-risk and infectious disease. Indonesia is one of the countries impacted by COVID-19 with an emergency situation. The pandemic affected all areas of life, especially education. As a result, schools from kindergartens until Universities have been closed. In less than a month, The Ministry of Education made a policy to replace face-to-face learning became online learning to break the chain of spreading the virus.

Since there is still no certainty when this pandemic will end, online learning is an absolute necessity that must be fulfilled by all Indonesian students. Learning activities that were previously carried out face-to-face in the classroom turned into an online learning system. The concept of social distancing and physical distancing requires everyone to stay at home so that the virus does not spread. Some applications were used to include lecture material, assignments, online discussions, and review the learning process. This method was increasingly being used as well by other institutions in various countries to provide opportunities and the needs of students in the continuity of learning.

Online learning is a learning method that assists learners to conduct more diverse learning. Through the facilities arranged by the system, students can learn without being restricted by distance, space, and time (Churiyah et al., 2020). Online learning has advantages and disadvantages that have an impact on the achievement of the learning objectives itself. Adnan (2020) states that online learning is considered more accessible because it is affordable to rural areas. Flexibility is another interesting aspect since students can schedule or plan their time to complete the courses and assignments that are available online, so the students can develop new skills in the learning process anywhere and anytime.

However, this unexpected change in the online learning method makes people aware that there are still many disadvantages to using this method. Internet access and the inadequate availability of the latest technology in several areas affect the responses and capacity of students to participate in digital learning. Lack of real interaction between lecturers and students causes students to feel bored and unfocused in learning through virtual classrooms. Students only communicate with their lecturers and peers digitally. Thus, real-time sharing of ideas, knowledge, and information was lost from the world of online learning (Adnan, 2020).

Based on the background of the problems described above, it is important to investigate whether students were ready to implement online learning. On the basis of this thought, the writer then stated the purpose of this study was to determine the readiness of undergraduate students in online learning during the COVID-19 pandemic. Furthermore, this study was conducted to find out the suggestions of undergraduate students in improving online learning readiness at the University of Muhammadiyah Prof. Dr. Hamka.

In 2020, Hidayat & Hamrat adopted the Online Learning Readiness Scale (OLRS) instrument by Hung et al., (2010) into Bahasa Indonesia and to test its psychometric properties for Indonesian use. Online Learning Readiness Scale (OLRS) instruments is an instrument to assess students’ readiness in online learning through confirmatory factor analysis. OLRS has 18 items in five important dimensions, namely computer/internet self-efficacy (3 items), self-directed learning (5 items), learner control (3 items), motivation for learning (4 items) and online communication self-efficacy (3 items). In the study of Hidayat & Hamrat (2020) showed that statistical analysis provided evidence that the Indonesian version of OLRS has a good consistency. It suggests that the Indonesian version of OLRS can be used by researchers, psychologists, and teachers to assess students’ online learning readiness in Indonesia.

To fulfill the purpose of this study and to gain a comprehensive understanding of students’ readiness for online learning, this study adopted the framework of Online Learning Readiness Scale (OLRS) Indonesian version since it consists of more dimensions as well as more items that cover the attitude and behaviour of online learners. It is more comprehensive than the Readiness for Online Learning instrument provided by other researchers. OLRS instruments can be characterized as containing both general dimensions such as motivation for learning and Computer/Internet self-efficacy, and specific dimensions...
such as self-learning, online communication self-efficacy, and learner control. Also, OLRS instruments have benefits to assist further research in the context of online learning.

B. Literature Review

Recently, students’ readiness to learn was an important aspect of learning activities, especially in online learning. In the following years, many researchers studied and developed the concept of online learning readiness. It was studied in multiple dimensions and measured in various validated scales. In 2020, Hidayat & Hamrat adopted the Online Learning Readiness Scale (OLRS) instrument by Hung et al., (2010) into Bahasa Indonesia and to test its psychometric properties for Indonesian use. Online Learning Readiness Scale (OLRS) instruments was an instrument to assess students’ readiness in online learning through confirmatory factor analysis. OLRS has 18 items in five important dimensions, namely computer/internet self-efficacy, self-directed learning, learner control, motivation for learning, and online communication self-efficacy.

Briefly, the OLRS instrument was an online learning readiness scale that presents different dimensions with a broad research scope that includes the attitudes and behaviour of online students. These measurements have been validated and with five various dimensions are considered to strengthen research on student readiness for online learning.

1. Computer/Internet Self-efficacy

Computer/Internet self-efficacy is an influencing factor in online learning readiness. Computer self-efficacy is based on the individual’s belief and confidence in their computer skills and knowledge (Sarfo et al., 2017). Meanwhile, Internet self-efficacy is a form of appraisal to determine individual proficiency in using applications or learning tools in online learning (Lu et al., 2018). Schlebusch, (2018) concluded that the Computer/Internet self-efficacy of students influenced their proficiency in using ICT. However, students who are familiar with using the internet are not necessarily comfortable using computers. Thus, students need to have confidence in using computers and the internet, and also be able to motivate themselves to find solutions in solving a problem.

2. Self-directed Learning

Self-directed learning is one of the most important aspects in order to improve the quality of students in learning, especially in online learning. Sumuer, (2018) argued that self-directed learning tends to occur in the context of learning that supports students plan, implementing, and evaluating their learning independently by using skills through some elements such as; motivation, self-management, and self-control. Serttaş & Kasabalı, (2020) also defined self-directed learning as learning that requires students to find appropriate methods and strategies to meet their needs and support their strengths. In conclusion, students were trained to understand learning material, complete assignments and solve problems with appropriate solutions, and evaluate learning outcomes independently.

3. Learner Control

Learning environment affects students in achieving learning goals. According to Abdul-Rahman, (2020), Learner control was a strategy that provides opportunities for students to make decisions in managing study time, and find effective ways of implementing the learning process. Therefore, students need self-control to examine whether they have 'learner control' since the accuracy of learning strategies and methods can affect student performance in achieving learning goals.

4. Motivation for Learning

Motivation is one of the most important factors influencing the success of language learning and it cannot be denied. Timor et al., (2021) argued that motivation causes a change in energy which is marked by a reaction to achieve a goal within itself. This reaction is usually in the form of encouragement in themselves to try and compete in doing something to get better results than before and can overcome obstacles that occur. However, all students in the class do not have the same type and level of motivation. Some learners may have very strong motivation to learn a language, others may have weaker motivation, and others may not be motivated at all. Therefore, the motivation of students supports the
performance of students in achieving their goals, strengthens their learning, makes it easier to remember and store information.

5. Online Communication Self-efficacy

In online learning environment, there is no face-to-face interaction like in a traditional learning environment, students and lecturers only interact using online communication tools. Online communication tools include e-mail, chat rooms, and other messaging applications. Chung et al., (2020) stated that online communication self-efficacy is important to reflect on the lessons that have been learned and express their thoughts and emotions. Thus, online communication self-efficacy is an essential dimension to overcome the limitations of online communication.

C. Methodology

According to Sugiyono, (2013:14) The qualitative research method is a naturalistic research method since the research is carried out in natural conditions. Qualitative research is conducted to analyze facts, symptoms, and events that occur in the field according to natural situations and conditions. This study applied the qualitative research method since this study focused on a survey given to the subject of the study to find out the undergraduate students’ readiness for online learning during the Covid-19 Pandemic. This research was conducted at the University of Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia. Subjects in this study were undergraduate students from nine faculties at the University of Muhammadiyah Prof. Dr. Hamka. The research instruments used were closed-ended questionnaires by Google form and in-depth interviews by WhatsApp.

A total of 220 students were randomly selected to fill out the questionnaires through a Google form. The answers were analyzed to determine undergraduate students’ readiness in online learning. Question statements can be graded as Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA) based on a Likert scale which did not have correct or wrong answers and presented in the form of a percentage. The questionnaires measured 5 dimensions of the Online Learning Readiness Scale (OLRS) Indonesian version by Hidayat & Hamrat (2020) consist of:

<table>
<thead>
<tr>
<th>No.</th>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer/Internet Self-Efficacy</td>
<td>Computer self-efficacy is based on the individual’s belief and confidence in their computer skills and knowledge (Sarfo et al., 2017). Meanwhile, Internet self-efficacy is a form of appraisal to determine individual proficiency in using applications or learning tools in online learning (Lu et al., 2018).</td>
</tr>
<tr>
<td>2</td>
<td>Self-Directed Learning</td>
<td>Şerttaş &amp; Kasabali, (2020) also defined self-directed learning as learning that requires students to find appropriate methods and strategies to meet their needs and support their strengths.</td>
</tr>
<tr>
<td>3</td>
<td>Learner Control</td>
<td>Abdul-Rahman, (2020), Learner control was a strategy that provides opportunities for students to make decisions in managing study time, and find the effective ways of implementing the learning process.</td>
</tr>
<tr>
<td>4</td>
<td>Motivation for Learning</td>
<td>Timor et al., (2021) argued that motivation causes a change in energy which is marked by a reaction to achieve a goal within itself.</td>
</tr>
<tr>
<td>5</td>
<td>Online Communication Self-Efficacy</td>
<td>Chung et al., (2020) stated that online communication self-efficacy is important to reflect on the lessons that have been learned and express their thoughts and emotions.</td>
</tr>
</tbody>
</table>
After distributing the questionnaires, the researchers also took data from the interviews. Interviews were conducted by 18 students from 9 faculties at the University of Muhammadiyah Prof. Dr. Hamka. Each faculty was taken a sample of 2 students to be interviewed through WhatsApp. The questions were related to the 5 dimensions of online learning readiness as in the questionnaire. Furthermore, this interview was conducted to find out the suggestions of undergraduate students in improving online learning readiness at the University of Muhammadiyah Prof. Dr. Hamka. This interview was conducted to find deeper information from the data obtained from the questionnaires.

D. Findings and Discussion

1. Closed-ended Questionnaires

In order to comprehend undergraduate students' readiness in online learning, the researchers distributed Online Learning Readiness Scale (OLRS) Indonesian version by Hidayat & Hamrat, (2020). The results were summarized in Table 1 below:

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel confident in performing the basic functions of Microsoft Office programs (MS. Word, MS. Excel, and MS. PowerPoint)</td>
<td>0 (0%)</td>
<td>1 (0.5%)</td>
<td>41 (18.6%)</td>
<td>102 (46.4%)</td>
<td>76 (34.5%)</td>
</tr>
<tr>
<td>2</td>
<td>I feel confident in my knowledge and skills of how to manage software for online learning.</td>
<td>0 (0%)</td>
<td>3 (1.4%)</td>
<td>53 (24.1%)</td>
<td>104 (47.3%)</td>
<td>60 (27.3%)</td>
</tr>
<tr>
<td>3</td>
<td>I feel confident in using the Internet (Google, Yahoo) to find or gather information for online learning.</td>
<td>0 (0%)</td>
<td>3 (1.4%)</td>
<td>21 (9.5%)</td>
<td>71 (32.3%)</td>
<td>125 (56.8%)</td>
</tr>
<tr>
<td>4</td>
<td>Carry out my own study plan.</td>
<td>1 (0.5%)</td>
<td>6 (2.7%)</td>
<td>66 (30%)</td>
<td>94 (42.7%)</td>
<td>53 (24.1%)</td>
</tr>
<tr>
<td>5</td>
<td>I seek assistance when facing learning problems.</td>
<td>0 (0%)</td>
<td>3 (1.4%)</td>
<td>15 (6.8%)</td>
<td>95 (43.2%)</td>
<td>107 (48.6%)</td>
</tr>
<tr>
<td>6</td>
<td>I manage time well.</td>
<td>4 (1.8%)</td>
<td>20 (9.1%)</td>
<td>82 (37.3%)</td>
<td>81 (36.8%)</td>
<td>33 (15%)</td>
</tr>
<tr>
<td>7</td>
<td>I set up my learning goals.</td>
<td>2 (0.9%)</td>
<td>8 (3.6%)</td>
<td>69 (31.4%)</td>
<td>100 (45.5%)</td>
<td>41 (18.6%)</td>
</tr>
<tr>
<td>8</td>
<td>I have higher expectations for my learning performance.</td>
<td>0 (0%)</td>
<td>1 (0.5%)</td>
<td>30 (13.6%)</td>
<td>106 (48.2%)</td>
<td>83 (37.7%)</td>
</tr>
<tr>
<td>9</td>
<td>I can direct my own learning progress.</td>
<td>1 (0.5%)</td>
<td>3 (1.4%)</td>
<td>65 (29.5%)</td>
<td>103 (46.8%)</td>
<td>48 (21.8%)</td>
</tr>
<tr>
<td>10</td>
<td>I am not distracted by other online activities when learning online (instant messages, internet surfing).</td>
<td>14 (6.4%)</td>
<td>58 (25.5%)</td>
<td>71 (32.3%)</td>
<td>56 (25.5%)</td>
<td>23 (10.5%)</td>
</tr>
<tr>
<td>11</td>
<td>I repeated the online instructional materials on the basis of my needs.</td>
<td>1 (0.5%)</td>
<td>12 (5.5%)</td>
<td>79 (35.9%)</td>
<td>89 (40.5%)</td>
<td>39 (17.7%)</td>
</tr>
<tr>
<td>12</td>
<td>I am open to new ideas.</td>
<td>0 (0%)</td>
<td>9 (4.1%)</td>
<td>60 (27.3%)</td>
<td>96 (43.6%)</td>
<td>55 (25%)</td>
</tr>
<tr>
<td>13</td>
<td>I have motivation to</td>
<td>3 (1.4%)</td>
<td>9 (4.1%)</td>
<td>52 (24.1%)</td>
<td>105 (48.2%)</td>
<td>51 (23.6%)</td>
</tr>
</tbody>
</table>
Statements 1, 2, and 3 on the questionnaire were included in the first online learning readiness dimension, namely Computer/Internet Self-Efficacy. After statement 1, 2, 3 was calculated, the result of this study showed that the highest percentage of 51% of students stated "strongly agree", 48% of students stated “agree”, only 1% of students stated “neutral” and there were no students who stated “disagree” and "strongly disagree”. So it can be concluded that undergraduate students show a positive response in this dimension. That means they have very high self-readiness in Computer/Internet Efficacy for online learning. Here was the diagram of the result of the data.

<table>
<thead>
<tr>
<th>Statements</th>
<th>(1.4%)</th>
<th>(4.1%)</th>
<th>(23.6%)</th>
<th>(47.7%)</th>
<th>(23.2%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 I improve from my mistakes.</td>
<td>1 (0.5%)</td>
<td>3 (1.4%)</td>
<td>23 (10.5%)</td>
<td>99 (45%)</td>
<td>94 (42.7%)</td>
</tr>
<tr>
<td>15 I like to share my ideas with others.</td>
<td>1 (0.5%)</td>
<td>3 (1.4%)</td>
<td>54 (24.5%)</td>
<td>98 (44.5%)</td>
<td>64 (29.1%)</td>
</tr>
<tr>
<td>16 I feel confident in using online tools (email, discussion) to effectively communicate with others.</td>
<td>2 (0.9%)</td>
<td>10 (4.5%)</td>
<td>46 (20.9%)</td>
<td>96 (43.6%)</td>
<td>66 (30%)</td>
</tr>
<tr>
<td>17 I feel confident in expressing myself (emotions and humor) through text.</td>
<td>3 (1.4%)</td>
<td>14 (6.4%)</td>
<td>56 (25.5%)</td>
<td>93 (42.3%)</td>
<td>54 (24.5%)</td>
</tr>
<tr>
<td>18 I feel confident in posting questions in online discussions.</td>
<td>2 (0.9%)</td>
<td>26 (11.8%)</td>
<td>87 (39.5%)</td>
<td>70 (31.8%)</td>
<td>35 (15.9%)</td>
</tr>
</tbody>
</table>

![Picture 1: the result of Computer Self-Efficacy](image)

Statements 4, 5, 6, 7, and 8 on the questionnaire are included in the second online learning readiness dimension, namely Self-Directed Learning. After statement 4, 5, 6, 7, 8 was calculated, the result of this study showed that the highest percentage of 57% of students stated “agree”, 38% of students stated “strongly agree”, only 4% of students stated “neutral”, while a student stated “disagree” and there were no students who stated "strongly disagree". So it can be concluded that undergraduate students show a positive response in this dimension. That means in the dimension of Self-directed Learning they have readiness in online learning. Here was the diagram of the result of the data.
Statements 9, 10, and 11 on the questionnaire are included in the third online learning readiness dimension, namely Learner Control. After statement 9, 10, and 11 was calculated, the result of this study showed that the highest percentage of 53% of students stated “agree”, 30% of students stated “neutral”, 17% of students stated “strongly agree”, while 1% of students stated “disagree” and there were no students who stated “strongly disagree”. So it can be concluded that students’ answers on this dimension were very diverse. A lot of them have readiness in learner control, however, there were still some students who were unsure about their readiness in the dimension of learner control. Here was the diagram of the result of the data.

Statements 12, 13, 14, and 15 in the questionnaire are included in the fourth online learning readiness dimension, namely Motivation for Learning. After statement 12, 13, 14, and 15 was calculated, the result of this study showed that the highest percentage of 52% of students stated “agree”, 40% of students stated “strongly agree”, 7% of students stated “neutral”, while only a student stated “disagree” and there were no students who stated and “strongly disagree”. So it can be concluded that undergraduate students show a positive response in this dimension. That means they have very high self-readiness for online learning in the dimension of Motivation for Learning. Here was the diagram of the result of the data.
Statements 16, 17, and 18 in the questionnaire are included in the last online learning readiness dimension, namely Online Communication Self-Efficacy. After statement 16, 17, and 18 was calculated, the result of this study show that the highest percentage of 48% of students stated “agree”, 29% of students stated “strongly agree”, 23% of students stated “neutral”, and there were no students who stated “disagree” and “strongly disagree”. So it can be concluded that students’ answers on this dimension were diverse. A lot of them have readiness in online communication, however, there were still a few students who were unsure about their readiness in the dimension of online communication self-efficacy. Here was the diagram of the result of the data.

2. In-depth Interviews

In this section, the interview questions were related to the 5 dimensions of online learning readiness as in the questionnaire conducted to find deeper information from the data obtained from the questionnaires. Furthermore, this interview was conducted to find out suggestions from students concerning the improvement of online learning readiness.

Based on the results obtained for the Computer/Internet Self-Efficacy, students showed the highest readiness in online learning. Students felt very ready and confident in using computers and the internet during online learning since they were used to operating the computer and applying the internet in daily activities. This was supported by Chung et al., (2020) which stated that nowadays, students were proficient in using technology since this digital era was already rich in technological advances. However, several obstacles were often experienced, especially for students who lived in rural areas with limited facilities such as unstable internet connections and sudden damage to the laptop during online learning.

Next, in the dimension of Self-directed Learning, students showed their readiness about online learning. They made their lesson plans and were able to solve their learning problems in various ways, such as repeating learning materials, taking material notes, and discussing with their friends. Even though they often found it difficult to manage their study time during online learning, they still try to do learning optimally. Serttaş & Kasabalı, (2020) stated that self-
directed learning as learning that requires students to find the right strategies to support their learning needs. That means students of the University of Muhammadiyah Prof. Dr. Hamka can find their respective learning strategies according to their needs and goals in online learning.

In the dimension of Learner Control, students showed that they were unsure in online learning. They can direct their learning progress by repeating the learning material that has been learned to keep achieving the target in learning. However, most of them found it difficult to control themselves from interference from other online activities such as notification from others social media during online learning. They used other social media when online learning takes place. It caused them to lose focus on learning. In his research, Chung et al., (2020) got similar results. In this dimension, the results of their research show that Learner Control has the lowest average among the other five dimensions. Therefore, to overcome these problems and stay focused during online learning, they did several effective ways such as turning off notifications from others social media, keeping their smartphones out of reach, and participating in online learning using laptops.

Then, in the dimension of Motivation for Learning, students showed higher readiness in online learning. They realized that the implementation of online learning during the Covid-19 pandemic requires high self-motivation to learn. Vasilevska et al., (2017) stated that high motivation is a driving force for students to achieve their learning goals. Therefore, the things they can do to motivate themselves in online learning are by looking at the struggles of their parents and their goals to complete education by getting maximum results or according to the target achievement. So that, it can be concluded that motivation was the most important factor in students’ readiness for online learning.

Last, in the dimension of Online Communication Self-Efficacy, students showed their readiness in online learning and felt the confidence to communicate online. They also stated that communicating online can also minimize making mistakes in speaking due to nervousness. Chung et al., (2020) argued that students who had high online communication self-efficacy have the ability to express themselves in writing rather than speaking. However, some of them also thought that in terms of convenience, they were still more comfortable communicating offline to minimize misunderstandings and tried their courage to speak properly and correctly.

Furthermore, students provided suggestions concerning the improvement of online learning readiness. They expect effective and interesting learning as accompanied by games and fun videos related to learning materials. They expect all educators to provide detailed and easy-to-understand material explanations and be able to master the use of technology in order to improve the quality of the online learning media itself. In addition, there was a need for communication and collaboration between students and lecturers, so online learning will be easier to implement. They also hope that the internet quota can be evenly distributed to rural areas since students who live in rural areas will get more obstacles than students living in big cities.

E. Conclusion

Based on the results of the research and discussion that have been described above, it can be concluded that undergraduate students at the University of Muhammadiyah Prof. Dr. Hamka have readiness in implementing online learning with some different variations in each dimension. It showed that undergraduate students’ readiness was high in the dimensions of Computer/Internet Self-Efficacy and Motivation for Learning. Furthermore, the dimensions of Self-Directed Learning, Learner Control, and Online Communication Self-Efficacy showed that undergraduate students’ readiness was moderate.

Although many students already have online learning readiness, there were still some students who showed their doubts during the implementation of online learning. There were several obstacles that they experienced during online learning, such as an unstable internet connection, especially for students who lived in rural areas with limited facilities, which was one of the obstacles to the implementation of online learning. In addition, most of them also need help in managing their study time independently during online learning. They also felt disturbed by other online activities such as notifications from other social media during online learning. Then, in terms of communicating, they had high confidence to communicate online during online learning, but in some cases, they still felt more comfortable if they can communicate directly or offline to minimize misunderstandings.
Therefore, the researcher recommends several suggestions for consideration and thoughts in the implementation of online learning. The first suggestion is to prepare for the quality of online learning more maturely. Not only the learning media but also students and lecturers also have to improve their quality so that the implementation of online learning in the future can run optimally.

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F. References

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